



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,256	08/01/2003	David T. Winslow	PD-02W085	4777

23915 7590 08/03/2004

PATENT DOCKET ADMINISTRATION
RAYTHEON SYSTEMS COMPANY
P.O. BOX 902 (E1/E150)
BLDG E1 M S E150
EL SEGUNDO, CA 90245-0902

EXAMINER

JONES, STEPHEN E

ART UNIT	PAPER NUMBER
2817	

DATE MAILED: 08/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633,256

Applicant(s)

WINSLOW ET AL.

Examiner

Stephen E. Jones

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/1/03.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 4-6, 9-12, 15-17, 20-25, 28-30, and 33-42 rejected under 35 U.S.C. 103(a) as being unpatentable over Howard et al. (US 5,675,302 cited by applicant) in view of Quan et al. (US 5,703,599).

Howard teaches an interconnect including: a dielectric body (e.g. 22) having a shielding conductor (40) disposed on its outer surface (i.e. a shield housing) (Claims 22, 24, 36, 38, 42); the designation of portions is an arbitrary assignment thus satisfying the limitations of portions of the dielectric body (Claims 23, 37, 41); cavities in the dielectric are provided with conductors including springy button contacts (e.g. 32A) (i.e. a spring

probe, Claims 4, 6, 9, 15, 17, 20, 28, 30, 33); the device is impedance matched (i.e. tuned; e.g. see Col. 5, lines 49-62) (Claims 5, 11, 16, 29, 35); and transmission line circuit boards (52, 72) are mated with the compressible conductor ends.

However, Howard does not teach that the conductor is an offset conductor in an offset cavity (Claims 1, 12, 25, 39, 40), or that the conductor is a bent conductive pin (Claims 10, 21, 34).

Quan provides the exemplary teaching of an offset interconnection.

It would have been considered obvious to one of ordinary skill in the art to have modified the Howard interconnects to have been bent offset conductors/cavities such as taught by Quan, because it would have been a mere selection of well-known connection configurations based on the pre-selected orientation/positions of the devices to be interconnected, thereby suggesting the obviousness of such a modification.

4. Claims 2-3, 7-8, 13-14, 18-19, 26-27, and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howard et al. (US 5,675,302 cited by applicant) and Quan et al. (US 5,703,599) as applied to claims 1, 6, 12, 17, 25, and 30 above, and further in view of Keesey et al. cited by applicant.

The combination of Howard and Quan teaches an interconnect as described above including a spring button connected to a conductor (i.e. a plunger). However, they do not explicitly teach that the spring button is a compressible wire bundle.

Keesey (Fig. 1) teaches that a compressible contact conductor (86) can be connected to a conductor (84) (i.e. a plunger) to form an interconnect and the compressible material can be a wire bundle (e.g. Fig. 6A).

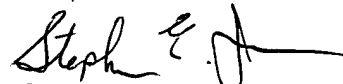
Art Unit: 2817

It would have been considered obvious to one of ordinary skill in the art to have substituted a compressible wire bundle such as taught by Keesey in place of the springy compressible button contact in the Howard/Quan device, because it would have been considered a mere substitution of well-known art-recognized equivalent compressible conductor contact means for connecting to a plunging conductor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 571-272-1762. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Stephen Jones
Patent Examiner
Art Unit 2817

SEJ